

In the Claims:

The following listing reflects amendments to the claims and replaces all prior versions and listings of claims in this application.

1. (Currently amended) A mucosal ~~DTPa~~ vaccine comprising:
 - (a) a diphtheria antigen, a tetanus antigen, and an acellular pertussis antigen; and
 - (b) a detoxified *E. coli* heat labile toxin, wherein the detoxified *E. coli* heat labile toxin is LT-K63 and or LT-R72 mutant, wherein said vaccine is adapted for intranasal administration ~~administered mucosally~~.
2. (Currently amended) The ~~DTPa~~ vaccine of claim 1, wherein the acellular pertussis antigen is detoxified.
3. (Currently amended) The ~~DTPa~~ vaccine of claim 2, wherein the acellular pertussis antigen comprises detoxified pertussis holotoxin and filamentous haemagglutinin.
4. (Currently amended) The ~~DTPa~~ vaccine of claim 3, wherein the acellular pertussis antigen further comprises pertactin.
5. (Currently amended) The ~~DTPa~~ vaccine of claim 3, wherein the detoxified pertussis holotoxin is a 9K/129G double mutant.
6. (Currently amended) The ~~DTPa~~ vaccine of claim 1, wherein the diphtheria antigen is detoxified.
7. (Currently amended) The ~~DTPa~~ vaccine of claim 6, wherein the detoxified diphtheria antigen is CRM197.

8. (Currently amended) The ~~DTPa~~ vaccine of claim 1, wherein the tetanus antigen is a tetanus toxoid.

9. (Currently amended) The ~~DTPa~~ vaccine of claim 1, further comprising at least one additional non-diphtheria, non-tetanus and non-acellular pertussis ~~non-DTP~~ antigen.

10-20. (Canceled)

21. (Withdrawn - currently amended) A method of generating an immune response in a patient, comprising intranasally ~~mucosally~~ administering to the patient a vaccine according to claim 1.

22. (Withdrawn) The method of claim 21, wherein the patient is a child.

23. (Withdrawn - currently amended) The method of claim 21, wherein intranasal ~~mucosal~~ administration is performed at least twice.

24. (Withdrawn - currently amended) The method of claim 21, wherein, prior to intranasal ~~mucosal~~ administration, the method comprises the step of non-mucosally administering to the patient a ~~DTPa~~ vaccine comprising a diphtheria, a tetanus and an acellular pertussis antigen.

25. (Withdrawn - currently amended) The method of claim 21, wherein, subsequent to intranasal ~~mucosal~~ administration, the method comprises the step of non-mucosally administering to the patient a ~~DTPa~~ vaccine comprising a diphtheria, a tetanus and an acellular pertussis antigen.

26. (Canceled)

27. (Withdrawn) The method of claim 21, wherein an immune response is generated against whooping cough, diphtheria and tetanus.

28-34. (Canceled)